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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BARRY H. SCHWAB
and JOHN G. POSA

Appeal 2009-001264
Application 09/877,597¹
Technology Center 2400

Decided: March 16, 2010

Before LEE E. BARRETT, LANCE LEONARD BARRY, and
JAY P. LUCAS, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1 and 3-11. We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We affirm-in-part.

¹ Filed June 8, 2001, titled "System for Transferring Desktop Computer Configuration."

STATEMENT OF THE CASE

The invention

The invention relates to a method of transferring user preferences from one computer to another using a transportable data storage medium. Information relating to the user's computer configuration preferences are recorded on the medium at a first computer, which is then loaded at a second computer, so as to at least temporarily configure the second computer in accordance with the information stored on the transportable medium.

See Abstract.

Illustrative claim

Claim 1, the sole independent claim, is reproduced below:²

1. A method of transferring user preferences from one computer to another, comprising the steps of:
 - providing a transportable data storage medium;
 - recording on the transportable data storage medium, at a first computer, unique information relating to a particularly user's computer configuration preferences, including information relating to the user's preferred desktop graphical interface;
 - receiving the transportable data storage medium at a second computer; and
 - at least temporarily configuring the second computer in accordance with the information stored on the transportable medium.

² Underlining indicates additions added by the amendment of October 14, 2005. In claim 1, "particularly" should be "particular."

Appeal 2009-001264
Application 09/877,597

The references

Lenz	US 6,029,196	Feb. 22, 2000
McGlothlin	US 6,512,526 B1	Jan. 28, 2003 (filed Aug. 17, 1999)
Kamper	US 6,654,797 B1	Nov. 25, 2003 (filed May 25, 2000)

The rejections

Claims 1 and 3-10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kamper and McGlothlin.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Kamper and McGlothlin, further in view of Lenz.

CONTENTIONS

The Examiner finds that Kamper teaches "transferring user preferences (i.e. configuration data allocated to different personnel; column 5, line 54 to column 6, line 11; Figure 3-item John Doe)" (Final Office Action (FOA) 3), including providing a transportable data storage medium, recording information related to a user's computer configuration preferences, receiving the transportable data storage medium at a second computer, and at least temporarily configuring the second computer. The Examiner finds that "Kamper fails to expressly disclose that the configuration data is unique information relating to a particular user's computer configuration preferences, including information relating to the user's preferred desktop graphical interface." FOA 4. The Examiner finds that these were well known features as evidenced by McGlothlin and concludes that it would

have been obvious to provide unique information related to a particular user's configuration preferences "thereby increasing ease of use." FOA 4. The Examiner cites Lenz for claim 11.

Appellants argue that the Examiner erred in concluding that Kamper or McGlothlin would have suggested "recording on the transportable data storage medium, at a first computer, unique information relating to a particular[] user's computer configuration preferences, including information relating to the user's preferred desktop graphical interface." Appellants' arguments will be considered in detail later.

ISSUES

Issue 1: Have Appellants shown that the Examiner erred in concluding that the limitation of "recording on the transportable data storage medium, at a first computer, unique information relating to a particular[] user's computer configuration preferences, including information relating to the user's preferred desktop graphical interface," as recited in claim 1, would have been obvious to one of ordinary skill in the art over the combination of Kamper and McGlothlin? The dependent claims are not separately argued and their rejection stands or falls with the rejection of claim 1.

Issue 2: Have Appellants shown that Examiner erred in concluding that the limitation, "wherein user files stored on the storage medium are updated in accordance with the use of the second computer," as recited in claim 11, would have been obvious to one of ordinary skill in the art over the combination of Kamper, McGlothlin, and Lenz?

PRINCIPLES OF LAW

"[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). A rejection under 35 U.S.C. § 103(a) is based on the following factual determinations: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) any objective indicia of non-obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 399 (2007) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)). "[H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. at 418 (2007). "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.* at 421.

"A reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994).

FINDINGS OF FACT

Kamper

Kamper relates to configuring servers using a removable storage device. Col. 1, ll. 8-9.

Kamper describes that "thin servers" are small-profile hardware devices that are bundled with software that provides a specific service or services. Col. 1, ll. 13-15. The intention is that these thin servers should be easy to install, configure, and maintain, but the reality is that configuration is a bottleneck. Col. 1, ll. 20-23.

Kamper describes three prior art methods for configuring thin servers. The first method uses a keyboard and monitor directly attached to the thin servers. The problem with this method is that the thin servers must be individually configured, which is labor intensive, and requires that keyboards and monitors be present even though the hardware is only used for configuration. Col. 1, ll. 24-40.

The second method used an LED panel and controls that are directly attached to the thin server. The problem is that this requires additional hardware cost and a person must be actually present at the device to enter configuration data. Col. 1, ll. 41-51.

The third method involves performing the configuration remotely using a remote workstation. The problem involve locating, connecting, and securing the thin server once it is plugged in and turned on. Col. 1, ll. 52-59.

Kamper describes placing configuration data on a removable storage device, such as a smart card. A removable storage device reader is coupled

to a server and the removable storage device is inserted into the reader. When power is supplied to the server, the server performs a boot-up sequence that includes uploading the configuration data from the removable storage device. In this way, the server is configured for use in a network. Col. 2, ll. 3-27.

McGlothlin

McGlothlin relates to customization of a desktop of a user in a multiuser environment. Abstract.

Manufacturers of personal computers often pre-install an operating system, such as Windows, by using another computer to copy an image of the operating system from a separate hard drive onto the target hard drive being created for the customer. Col. 1, ll. 43-54. Although this saves time, it is difficult to customize the customer's system without either creating and copying a new image, which is okay when installing standard applications but increases the complexity, or turning on the customer's machine and providing the customizations. Col. 1, ll. 55-67.

McGlothlin describes method for customization of the graphical user interface. When an operating system is first invoked, the system reads one or more configuration files related to the operating system which invokes an installation program to install the custom desktop components. The custom desktop component includes graphical images added to the graphical user interface during the first invocation. The user selects the graphical image

Appeal 2009-001264
Application 09/877,597

from the desktop layout. Several users may use the same computer system with a separate profile and desktop layout for each user. Col. 2, ll. 10-29.

Lenz

Lenz describes an automatic client configuration system which provides the system administrator with the ability to configure every client in the network with one file. "The file resides on the server and contains information for setting the client's lock files, e.g. preferences, configuration information, and software versions." Col. 1, ll. 58-61.

Clients contact the server for configuration information and the server returns configuration information which is used by the client to configure the system. Col. 1, l. 65 to col. 2, l. 1.

The administrator uses the server to query the clients in the network for information such as file version numbers and if the server determines that any file updates are needed, it sends the files to a specific client to replace the existing files. Col. 2, ll. 12-17.

ANALYSIS

Issue 1: claims 1-10

Kamper teaches transferring configuration data to a second computer (server) using a transportable data storage medium. The Examiner finds that Kamper does not teach the underlined terms in the limitation "recording on the transportable data storage medium, at a first computer, unique information relating to a particular[] user's computer configuration preferences, including information relating to the user's preferred desktop

graphical interface." These terms were added by the amendment of October 14, 2005, to overcome an anticipation rejection over Kamper. The Examiner relies on McGlothlin for a teaching that unique information related to a particular user's configuration preferences was known.

The issue is whether it would have been obvious to one of ordinary skill in the computer art that the configuration data in Kamper could be "unique information relating to a particular[] user's computer configuration preferences, including information relating to the user's preferred desktop graphical interface." Kamper does not describe the exact nature of the configuration data, however, a person of ordinary skill in the computer art would have had sufficient skill to appreciate that Kamper's general teaching of transferring configuration data using a transportable data storage medium suggests that any kind of configuration data can be transferred from one computer to another computer using a transportable medium. The "[obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." A person of ordinary skill must be presumed to have some skill, *In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985), and ordinary creativity, *KSR*, 550 U.S. at 418. As to "unique" information relating to a "particular" user's configuration, we note that the "user" is not defined in the claims and can be the person who is configuring a server; therefore, the server configuration information can be considered unique to that particular user. It is noted that claim 1 does not preclude transferring configuration

information to a server to permanently setup the server; the language "at least temporarily configuring the second computer" includes permanently configuring. Desktop GUI information is one of many known types of configuration information as evidenced by McGlothlin and one skilled in the art would have appreciated that this specific type of configuration information could be transferred to another computer.

Appellants argue that Kamper is limited to configuring a server computer for use in a network and "none of the various embodiments disclosed in Kamper in any way suggest the use of a removable storage device to store user data" (Br. 3³) or "to store data to be used for configuration of a particular graphical user interface (GUI)" (Br. 4).

However, Kamper discloses transferring configuration information and does not impose any limit on the type of information. The configuration information in Kamper is "user data" because the "user" is not defined. One skilled in the art had sufficient skill to appreciate that any kind of configuration information could be transferred with portable media. McGlothlin teaches that configuration information can include desktop GUI information.

Appellants argue that "[t]he process of McGlothlin is designed for configuring a new PC, or at least the first time a PC is used by a particular user. McGlothlin specifically excludes multiple runs of the configuration

³ We refer to the Corrected Appeal Brief filed November 12, 2007.

process. There is no mention in McGlothlin of a 'transportable data storage medium.'" Br. 3.

McGlothlin is applied to teach that configuration information can include information related to a user's preferred desktop graphical interface, not for a teaching of transportable data storage medium. Claim 1 does not preclude transporting configuration information for the purpose of configuring a new computer, such as the server in Kamper; i.e., claim 1 does not say that the second computer already has an operating system and is already set up for use. Claim 1 does not preclude information being transferred between more than two computers.

Appellants argue that "Kamper teaches away from even employing a display device for configuration purposes, let alone a GUI" (Br. 4) because Kamper teaches that, in the prior art, it was awkward to configure servers by attaching a terminal, keyboard, and mouse (Kamper, col. 5, ll. 8-16).

The claims are directed to transferring configuration information using a transportable data storage medium. The fact that a GUI might have been used on a display as part of a prior art setup does not say anything about transferring configuration information. Kamper does not imply that the method is limited to certain types of configuration information.

Appellants argue that "[t]here is no basis for the Examiner's argument that if the teachings of McGlothlin et al. were added to Kamper this would 'increase ease of use'" (Br. 4). It is argued that the portion of Kamper cited by the Examiner (col. 5, l. 65-col. 5, l. 5) says nothing about transfer of data relating to a GUI, nor does it have anything to do with "ease of use." Br. 4.

It is argued "[a]part from there being no evidence in support of this statement, 'ease of use' is so general and nebulous that firm conclusions cannot be drawn from such a term." Reply Br. 2.

We agree that the Examiner's motivation based on "ease of use" is not convincing and does not explain why one would combine the references to arrive at the particular claimed subject matter. General statements of motivation, such as "ease of use," "to increase processing speed," etc., are seldom helpful in explaining why a particular modification would be made. However, the Examiner reasons that it would have been obvious to add or substitute configuration information as taught by McGlothlin for the configuration information in Kamper and this is enough reason to combine.

Appellants argue:

In summary, both Kamper (6,654,797) and McGlothlin et al. (6,512,526) reside in systems for copying configuration information to multiple computers. In this sense, they are applicable primarily for use on an "assembly line" type of environment. Both systems describe a configuration process that occurs only at start-up (power-on) of the computer being configured. The user of these systems does not determine the configuration information, nor have the option of including unique information, such as files created by the user. The user of these systems is, in effect, prohibited from updating the receiving system by adding, deleting, or providing new versions of existing files.

Br. 5.

Claim 1 requires transporting configuration information to a second computer. Claim 1 does not preclude using the configuration information to setting up a computer initially and does not preclude using the configuration

information to set up multiple computers. In any case, although Kamper shows setting up more than one server, it does not require setting up more than one server. The user in Kamper, who may be the person configuring the server computers, determines configuration information and any configuration information may be considered "unique" to that user. The argument about adding or updating files is addressed with claim 11.

Appellants argue that the combination is not supported on "ease of use" grounds and even if the combination was proper, it would not teach "the transfer of GUI information particular to specific user, a feature which the primary reference of Kamper teaches away from." Br. 5-6. It is argued that "Kamper does, in fact, *teach away* from storing additional types of configuration data specific to user preferences, since Kamper is entirely silent on such preferences. The whole point of Kamper, as discussed by Appellants of record, is network configuration, such that 'user data' would be unnecessary and superfluous." Reply Br. 1.

Kamper does not mention that the configuration information can be "information relating to the user's preferred desktop graphical interface." However, silence is not a teaching away. A teaching away required some sort of statement that something cannot be done. McGlothlin shows that configuration information includes desktop GUI information.

We are not persuaded that the rejection is erroneous.

Issue 2: claim 11

The Examiner finds that Kamper and McGlothlin do not describe that user files are updated. The Examiner finds that Lenz teaches that updates to client files are used to replace existing files and concludes that one of ordinary skill in the art would have been motivated to implement this modification "thereby alleviating the need to [sic] for users to manually update their stored preferences and settings." FOA 7.

Appellants argue that the type of information transferred in Kamper does not lend itself to user updating. Br. 6. It is argued that the control in Lenz is at the central server, not the client, and "[a]ny combination that suggests that the control of the configuration process be removed to the user (client) location directly opposes the teachings and purpose of Lenz." Br. 7. It is further argued that all of the examples in Lenz specify the server computer as the source of the configuration files and there is no motivation to convert the system in Lenz to a system in which the control is removed from the centralized management environment. Br. 7. Appellants point out that the updating needs to be "information stored on the transportable medium." Reply Br 2.

The limitation at issue is quite broad and is really independent from the configuration information limitation. For example, if, in addition to configuration information, the transportable data storage medium had a word processing file which the user pulled up and worked on at the second computer and then saved back to the storage medium, this limitation would be met. The "user files" do not have to be configuration information.

However, the Examiner does not apply this interpretation or provide any prior art going to this interpretation.

We agree with Appellants that the Examiner has not shown any convincing reason why Kamper would have been modified by Lenz to update "information stored on the transportable medium." Lenz updates configuration information in a configuration file at the server. Kamper does not suggest that the person configuring the server would interact with the server and update files on the transportable medium. Therefore, Appellants have shown error in the Examiner's rejection.

CONCLUSION

Issue 1: Appellants have not shown that the Examiner erred in concluding that the limitation of "recording on the transportable data storage medium, at a first computer, unique information relating to a particular[] user's computer configuration preferences, including information relating to the user's preferred desktop graphical interface," as recited in claim 1, would have been obvious to one of ordinary skill in the art over the combination of Kamper and McGlothlin. The rejection of claims 1-10 is affirmed.

Issue 2: Appellants have shown that Examiner erred in concluding that the limitation, "wherein user files stored on the storage medium are updated in accordance with the use of the second computer," as recited in claim 11, would have been obvious to one of ordinary skill in the art over the combination of Kamper, McGlothlin, and Lenz. The rejection of claim 11 is reversed.

COMMENT ON RELATED PRIOR ART

Normally, we do not comment on the prior art where, as here, the rejection over prior art is affirmed. However, since we are aware of closer prior art, we feel it is our duty to bring it to the attention of Appellants and the Examiner to be considered in any future prosecution.

Attention is brought to the articles "Step-by-Step Guide to Migrating Files and Settings" (June 1, 2001), [http://technet.microsoft.com/en-us/library/bb-457074\(printer\).aspx](http://technet.microsoft.com/en-us/library/bb-457074(printer).aspx) (last visited 2/17/10), and "User State Migration in Windows XP" (June 1, 2001), [http://technet.microsoft.com/en-us/library/bb-457090\(printer\).aspx](http://technet.microsoft.com/en-us/library/bb-457090(printer).aspx) (last visited 2/17/10). Both articles describe state migration in Windows XP using removable media, a direct cable connection, or a network. Although the references are only prior art by a week, presumably, the provision of such a feature in Windows XP was due to some existing market demand for such a feature.

The Examiner should also consider Appellants' admitted prior art. Appellants admit that it was known to store configuration information, including information about the desktop graphical interface in customizing files on a central server and to allow users to access this configuration information over a network. The problem with this approach is that users must have access to the central server computer. Spec. 1, 1. 10 to Spec. 2, 1. 2. We note that Lenz also describes sending client configuration information from a server over a network. Kamper expressly teaches that an alternative to transferring server configuration information over a network is to use a transportable data storage medium. Thus, if the problem

Appeal 2009-001264
Application 09/877,597

transmitting configuration information without a network, the solution of using a transportable data storage medium to carry the configuration information is taught by Kamper.

CONCLUSION

The rejection of claims 1 and 3-10 under 35 U.S.C. § 103(a) is affirmed.

The rejection of claim 11 under 35 U.S.C. § 103(a) is reversed.

Requests for extensions of time are governed by 37 C.F.R. § 1.136(b).
See 37 C.F.R. § 41.50(f).

AFFIRMED-IN-PART

Attachments:

1. "Step-by-Step Guide to Migrating Files and Settings" (June 1, 2001)
2. "User State Migration in Windows XP" (June 1, 2001)

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User State Migration in Windows XP

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Abstract

This paper provides an overview of tools for migrating files and settings in the Windows® XP operating system. Part 1 includes a summary of the Files and Settings Transfer Wizard, which is aimed at individual users in a home, small office or lightly managed corporate environment. Part II provides a technical overview of the User State Migration Tool, a command-line tool designed for performing mass deployments of the Windows XP Professional in a corporate environment.

On This Page

[Introduction](#)

[Part I: Files and Settings Transfer Wizard Overview](#)

[Part II: User State Migration Tool \(USMT\) Overview](#)

[What's in USMT](#)

[Modifying the Migration Rule INF File](#)

[Summary](#)

[Related Links](#)

Introduction

Migrating files and settings is made easier in Windows XP with two tools aimed at different types of users and situations:

- **Files and Settings Transfer Wizard.** Designed for home users and small office users. The wizard is also useful in a corporate network environment for employees who get a new computer and need to migrate their own files and settings without the support of an IT department or Helpdesk.
- **UserState Migration Tool (USMT).** Designed for IT administrators in performing large deployments of Windows XP Professional in a corporate environment. USMT provides the same functionality as the wizard, but on a large scale targeted at migrating multiple users. USMT gives administrators command line precision in customizing specific settings such as unique modifications to the registry.

This paper is presented in two parts. Part 1 provides a short overview of the Files and Settings Transfer Wizard and helps users get started. Part II provides a deeper technical overview of USMT and shows administrators how to approach the modification of INF files.

[Top of page](#)

Part I: Files and Settings Transfer Wizard Overview

This section provides a summary of the Files and Settings Transfer Wizard. This tool is aimed at individual users in a home or small office environment, allowing them to migrate all of their files and settings.

Benefits of the Files and Settings Transfer Wizard

The wizard provides a quick and straightforward way for users to copy their files and settings and resume optimal productivity on their new computer or new installation of Windows. The wizard makes it easier to move to Windows XP through reduced:

- Downtime re-personalizing the desktop.
- Downtime finding missing work files.
- Need to call technical support with re-personalizing the desktop.

- Ramp-up time using the new operating system.

Migrated Settings

The settings fall into four major groups:

- **Appearance.** This includes items such as wallpaper, colors, sounds, and the location of the taskbar.
- **Action.** This includes items such as the key repeat rate, whether double-clicking a folder opens it in a new window or the same window, and whether you need to double-click or single-click an item to open it.
- **Internet.** These are the settings that let you connect to the Internet and control how your browser operates. This includes items such as your home page URL, favorites or bookmarks, cookies, security settings, dial-up connections, and proxy settings.
- **Mail.** This includes the information you need to connect to your mail server, your signature file, views, mail rules, local mail, and contacts. The mail clients supported are Outlook® and Outlook Express.

Application settings

The wizard currently supports migrating specific application settings including Microsoft Office (Access, Excel, Outlook®, PowerPoint®, and Word). Support for migrating additional applications will be included when Windows XP is released.

Note that only applications settings are migrated; actual applications are not migrated. Users still need to re-install applications on your new computer.

Summary of migrated settings

Migrated setting groups include:

- Internet Explorer settings
- Outlook Express settings and store
- Outlook settings and store
- Dial-Up connections
- Phone and modem options
- Accessibility
- Screen saver selection
- Fonts
- Folder options
- Taskbar settings
- Mouse and keyboard settings
- Sounds settings
- Regional options
- Office settings
- Network drives and printers
- Desktop folder

- My Documents folder
- My Pictures folder
- Favorites folder
- Cookies folder
- Common Office file types

Migrated Files

Files are migrated by file type (.DOC), folder (C:\My Documents), or specific name (C:\Important\money.mny). The wizard copies many of the common file types and folders by default and gives you the option of adding or removing folders, file types, or specific files.

To start the wizard

- Click **Start, All Programs, Accessories, System Tools, Files and Settings Transfer Wizard**.

For detailed guidance in using the wizard in different scenarios, see Step-by-Step Guide to Migrating Files and Settings at <http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/mgrtfset.mspx> [<http://technet.microsoft.com/en-us/library/bb457074.aspx>] .

[Top of page](#)

Part II: User State Migration Tool (USMT) Overview

The User State Migration Tool provides all the same functionality as the Files and Settings Transfer Wizard plus the ability for administrators to fully customize specific settings such as unique modifications to the registry.

USMT is designed for administrators only; individual users do not need to use USMT. In addition, USMT requires a client computer that is connected to a Windows Server domain controller.

Benefits of USMT

USMT reduces the cost of deploying the operating system by addressing each of the following areas:

- Migration technicians costs.
- Employee downtime re-personalizing the desktop.
- Employee downtime finding missing work files.
- Help desk calls assisting employees with re-personalizing their desktop.
- Employee ramp up time on the new operating system.
- Employee satisfaction with the migration experience.

USMT is driven by a shared set of INFs files that can be modified by IT professionals or OEMs. In virtually all cases, when using USMT for automated migration, IT pros will want to modify the INFs to better handle their unique environment and needs. This section addresses the technical details to help IT pros use USMT and modify INF files.

[Top of page](#)

What's in USMT

The User State Migration Tool consists of two executable files, ScanState.exe, LoadState.exe, and four migration rule information files Migapp.inf, Migsys.inf, Miguser.inf, and Sysfiles.inf.

ScanState.exe collects user data and settings based on the information contained in Migapp.inf, Migsys.inf, Miguser.inf and Sysfiles.inf. LoadState.exe deposits this user state data on a computer running a fresh (not upgraded) installation of Windows XP Professional.

Additional INF files can be created for additional migration requirements. With no modification to default settings, USMT migrates:

- Internet Explorer settings
- Outlook Express settings and store
- Outlook settings and store
- Dial-Up connections
- Phone and modem options
- Accessibility
- Classic desktop
- Screen saver selection
- Fonts
- Folder options
- Taskbar settings
- Mouse and keyboard settings
- Sounds settings
- Regional options
- Office settings
- Network drives and printers
- Desktop folder
- My Documents folder
- My Pictures folder
- Favorites folder
- Cookies folder
- Common Office file types

It is easy to modify what is included in the state that ScanState.exe collects. The tool can be instructed to collect or leave specified files, folders, registry entries, or registry subtrees. For rules on modifying the scripts, see Modifying the Migration Rule INF File below.

Table 1 UserState Migration Tool Requirements

Type of system	Requirements
Source system	Windows 95, Windows 98, Windows NT Workstation 4.0, or Windows 2000 Professional. Access to the intermediate store

Intermediate store	Storage based on data to be migrated. (50 MB is often enough for typical users, but this can vary.)
Target system	Windows XP Professional Access to the intermediate store Appropriate amount of drive space to receive the user state data

Using USMT

In the simplest case, the default migration rule INF file (Sysfiles.inf) is used as is for the migration. The administrator must create a script to run on the client workstation. The script should:

- Run ScanState.exe on the client workstation, copying the user state data to an intermediate store. You can send a shortcut to the script to the users and instruct them to run this program when they leave for the evening, or you can deploy the script automatically or on a schedule.
- Reformat the disk and install Windows XP Professional and applications as needed. This can be automated by using disk-imaging software.
- Run LoadState.exe as the local administrator on the client workstation to restore the user settings. (This can be done as a scheduled task running in the local administrator context.)

When the user logs on, the last of their user state data is reset.

If you want to modify the default parameters in Sysfiles.inf, follow these steps::

1. Identify which application settings to migrate.
2. Identify which file types, folders, or specific files to migrate.
3. Locate these settings and files and create a Migration Rule INF file for them.
4. Run ScanState.exe, copying the user state data to an intermediate store. You can send a shortcut to the script to the users and instruct them to run it when they leave for the evening, or you can deploy the script automatically or on a schedule.
5. Reformat the disk and install Windows XP Professional and any necessary applications. This can be automated by using disk-imaging software.
6. Run LoadState.exe as administrator to restore the user settings. (You can do this as a scheduled task running in the administrator context.) When the user logs on, the last of their user state data is reset.

The remainder of this paper explains the syntax and usage of the User State Migration Tool.

ScanState.exe Syntax

This section explains the syntax and usage of ScanState.exe.

```
scanstate [/c /i input.inf]* [/l scanstate.log]
[/v verbosity_level] [/f] [/u] [/x] migration_path
```

Table 1 Using ScanState.exe

Flag	Resulting Action
/c	Continues past filename_ too_long errors. Log files in Longfile.log.
/i	Specifies an INF file containing rules that define which user state data to collect. Multiple INF files can be specified.
/l	Specifies a file in which to log errors.

/v	Enables verbose output. The syntax is /v # where # is 1 to 7, with 1 being the least verbose, and 7 the most.
/u	Specifies that user settings will be migrated. This is a switch for troubleshooting only.
/f	Specifies that files will be migrated. This is a switch for troubleshooting only.
/x	Specifies that no files or settings should be migrated.
Note: The migration_path is a path to the location where files should be read/written.	

For example:

```
scanstate \\fileserver\migration\elizabeth /i .\migapp.inf /i .\migsys.inf /I
.\miguser.inf /i .\sysfiles.inf /i .\files.inf
```

By default, user settings, system settings, and files are migrated. Use the **/u**, **/f**, and **/x** flags only for troubleshooting. Multiple Migrate Rule INF files can be specified. If you specify more than one, the Sysfiles.inf Migration Rule INF file must be included.

LoadState.exe Syntax

This section explains the syntax and usage of LoadState.exe.

```
loadstate [/i input.inf]* [/l loadstate.log] [/v #] [/f] [/u] [/x] migration_path
```

Table 2 Using LoadState.exe

Flag	Resulting Action
/i	Specifies an INF file containing rules to define what state to migrate. Multiple INF files can be specified.
/l	Specifies a file in which to log errors.
/v	Enables verbose output. The syntax is /v # where # is 1 to 7, with 1 being the least verbose, and 7 the most.
/x	Specifies that no files or settings will be migrated. This is a switch for troubleshooting only.
/u	Specifies that user settings will be migrated. This is a switch for troubleshooting only.
/f	Specifies that files will be migrated. This is a switch for troubleshooting only.
Note: migration_path is a path to the location from which the files should be read.	

For example:

```
loadstate \\fileserver\migration\elizabeth /i .\miguser.inf
```

By default, user settings, system settings, and files are migrated. The **/u**, **/f**, and **/x** flags should only be used for troubleshooting. Multiple migrate rule INF files can be specified.

[Top of page](#)

Modifying the Migration Rule INF File

This section explains the rules and syntax for Migration Rule INF files (Migapp.inf, Miguser.inf, Migsys.inf and Sysfiles.inf). Only administrators who are familiar with scripting and the registry should attempt to modify the default Migration Rule INF file. You should thoroughly test the INF file after any modifications.

Special Folder and Environment Variable Support

The Migration Rule INF file supports path substitutions for the special folders defined by the CSIDL value set. When the name of the CSIDL is inserted between percent marks in the INF file, (for example %CSIDL_SYSTEM% or %CSIDL_PERSONAL%), USMT uses them. Any environment variables are also supported if the user and administrator define them the same.

For example:

```
%CSIDL_PERSONAL%\*.txt would match C:\Documents and Settings
```

File Include Rules

Additional files and folders can be included in the migration by adding a **CopyFiles** label to the **[Copy This State]** section of a Migration Rule INF file. The **CopyFiles** label is followed by a section name. The section contains the files and folders to be migrated to the destination machine.

For example:

```
[Copy This State]
CopyFiles=Copy Trip Reports
[Copy Trip Reports]
; The next line copies the TripRpts folder non-recurring
DIR=C:\TripRpts
; The next line copies everything in the TrpRpts folder-recurring ONLY
DIR=C:\TripRpts\*
; The next line copies all files on the user's desktop in a folder called TripRpts
; matching the 99*.DOC wildcard search.
%CSIDL_DESKTOP%\TripRpts\99*.DOC
```

File Exclude Rules

If you do not want to migrate some files or folders, add a **DelFiles** label to the **[Copy This State]** section of a Migration Rule INF file to have those files and folders excluded from the migration. The **DelFiles** label is followed by a section name. The section contains the files and folders that must not be copied to the destination. If ScanState.exe was originally going to copy the specified items, now it does not. Note that the file and folder specified in this section are not actually deleted from either the original or destination computer.

For example:

```
[Copy This State]
DelFiles=Trip Reports DelFiles
[Trip Reports DelFiles]
; We don't want to migrate the July '99 trip report
%CSIDL_DESKTOP%\TripRpts\9907*.DOC
```

Write to a Different Location Than Read

Often migration is used to move towards a more managed desktop. To this end, administrators want to move many of the user's documents into the My Documents folder, CSIDL_PERSONAL. This is accomplished by adding the destination folder on the target computer to the end of a CopyFiles section. This new folder is used as the root for the files. You can also copy to folders other than "My Documents" by re-rooting to the destination folder. Direct naming (such as C:\DATA) is supported. For more information about moving files, see "Registry Move and Copy Rules" below.

For example:

```
[Copy This State]
CopyFiles=Copy Trip Reports
[Copy Trip Reports]
; The next line copies the TripRpts folder
DIR=C:\TripRpts, %CSIDL_PERSONAL%
; The next line copies everything in the TrpRpts folder
DIR=C:\TripRpts\*, %CSIDL_PERSONAL%
; The next line copies all files on the user's desktop in a folder called ; TripRpts
; matching the 99*.DOC wildcard search.
%CSIDL_DESKTOP%\TripRpts\99*.DOC, %CSIDL_PERSONAL%
```

In the previous example all of the files are moved to the user's My Documents folder indicated by CSIDL_PERSONAL. The C:\TripRpts folder would be relocated under My Documents. (C:\Documents and Settings\<username>\My Documents\TripRpts).

Wildcards

The Migration Rule INF file supports Microsoft® MS-DOS® style wildcard searches with a few extensions. For example, the

character * matches zero or more characters, ? matches a single character. If the pattern string contains back slashes, the fully qualified path name of the target file is matched against the pattern; otherwise, only the file name+extension portion is matched. Multiple wildcard characters are allowed in the pattern string. If the pattern is intended to match a directory only, it should have a **dir=tag** statement at the beginning of the line.

Examples:

- C:\TripRpts\2000\August.* matches c:\TripRpts\2000\august.doc and c:\TripRpts\2000\august.xls.
- It does not match c:\TripRpts\august.doc.
- August.* matches c:\TripRpts\2000\august.doc, c:\TripRpts\2000\august.txt, and c:\TripRpts\august.doc.
- *.doc matches c:\TripRpts\2000\august.doc and c:\TripRpts\august.doc.
- c:*\\2000*.* matches c:\TripRpts\2000\august.doc, c:\TripRpts\2000\august.txt, and c:\ExpenseRpts\2000\morefiles.ext.
- c:\TripRpts matches a file named c:\TripRpts but not a directory named c:\TripRpts.
- dir=c:\TripRpts matches directory TripRpts but not file TripRpts.
- To get all DOC files on the system, use *.doc.
- To get all DOC files on drive c:\, use c:\.doc or c:**.doc.

Settings\%username%\My Documents\august.txt

Registry Include Rules

Additional registry entries or even entire registry subtrees can be included in the migration by adding an **AddReg** label to the **[Copy This State]** section of a Migration Rule INF file. The **AddReg** label is followed by a section name. The section contains registry subkeys and entries to be copied to the destination computer. These entries will overwrite any corresponding registry entries on the destination computer.

For example:

```
[Copy This State]
AddReg=SpaceCadet AddReg
[SpaceCadet AddReg]
HKR\Software\Microsoft\Plus!\Pinball\ SpaceCadet\*=
```

Registry Exclude Rules

If some entries should not be migrated, add a **DelReg** label to the **[Copy This State]** section of a Migration Rule INF file. The **DelReg** label is followed by a section name. The section contains registry entries that should not be copied to the destination.

Note: Using this rule does not actually delete any entries from the destination computer.

For example:

```
[Copy This State]
DelReg=SpaceCadet DelReg
[SpaceCadet DelReg]
HKR\Software\Microsoft\Plus!\Pinball\ SpaceCadet [Table Exe]=
```

Registry Move and Copy Rules

Often, a registry entry must be moved during the migration. If upgrading from Windows 95 or Windows 98 to Windows XP Professional, most registry subkeys and entries must be changed, moved, deleted, or added. This is done by adding the **RenReg** label in the **[Copy This State]** section. The **RenReg** label is followed by a section name. This section contains registry entries to be copied to the destination machine and renamed or moved.

For example:

```
[Copy This State]
RenReg= Outlook98&97 RenReg
```

```
[Outlook98&97 RenReg]
HKR\Software\Microsoft\Windows Messaging Subsystem\Profiles\*= \
HKR\Software\Microsoft\Windows NT\CurrentVersion\Windows Messaging Subsystem\Profiles
```

Note: When a back slash (\) is the last character on a line in a Migration Rule INF file, it indicates that the command continues on the next line.

When the value of a registry entry is a pointer to a file that also needs to be migrated, the **RegFile** label in the **[Copy This State]** section can copy the file indicated by the registry value. The **RegFile** label is followed by a section name. This section contains registry entries. Each entry listed must contain a file name. All file names listed are copied to the destination computer. The file path in the entry on the destination computer is set to the actual location of the file (in case the file was moved). An entry can be listed under both the **RenReg** and **RegFile** sections. **RegFile** can also move files.

For example:

```
[Copy This State]
RegFile=Desktop RegFile
[Desktop RegFile]
HKR\Control Panel\Desktop [wallpaper]=
; This next line would move the wallpaper image to My Documents.
; You would NOT have both of these in the same file.
HKR\Control Panel\Desktop [wallpaper]=, %CSIDL_PERSONAL%
```

Rule Precedence

When multiple rules can be applied to the same file or folder, an algorithm is used to find the best matching rule. In general, the one that *most closely describes the file or folder in question wins*. If two rules describe the file or folder equally well, the **INCLUDE** rule wins. The full path and file name are considered when trying to find the closest match. Equally matching rules often have unexpected results. Registry rules are applied in the following order:

- **DelReg** can be specified to ScanState.exe or LoadState.exe.
- **AddReg**, **RenReg**, and **RegFile** can be specified to either ScanState.exe or LoadState.exe. However, if they are specified to LoadState.exe and not ScanState.exe, the specified entry might not be copied. In the case of **RegFile**, the file might not be copied.
- Anything listed under **DelReg** is not copied to the destination computer.
- Anything listed under **RenReg** is renamed. If the same key is listed multiple times, only one rename rule applies.
- Anything listed under **RegFile** must have the path in the value fixed. Listing an entry under **RegFile** multiple times is the same as listing it once.
- Anything listed under **AddReg** overwrites the corresponding key on the destination computer. Listing an entry multiple times is the same as listing it once.
- If an entry exists on the destination computer, it is not overwritten (unless the entry is listed in an **AddReg** section).

An entry can have one rule from each of the set of **RenReg**, **RegFile**, and **AddReg** rules. In that case, all the specified rules are applied simultaneously. However, all rules applied simultaneously must be at the same depth in the path. For example, you might apply an **AddReg** and **RenReg** rule to the HKEY_LOCAL_MACHINE \Software \Microsoft \Exchange* subkey. If you applied an **AddReg** rule to the HKEY_LOCAL_MACHINE \Software \Microsoft \Exchange* subkey and a **RenReg** rule to the HKEY_LOCAL_MACHINE \Software \Microsoft \Exchange \Client subkey, the **RenReg** rule takes precedence because it provides the more specific description.

[Top of page](#)

Summary

This article explains the context and role of the migration tools in Windows XP: The Files and Settings Transfer Wizard and the User State Migration Tool (USMT).

The Files and Settings Transfer Wizard is designed for home users and small office users. The wizard is also useful in a corporate network environment for employees who get a new computer and need to migrate their own files and settings without the support of an IT department or Helpdesk. For detailed steps on using the wizard, see the companion paper "Step-by-Step Guide to Migrating Files and Settings" at

<http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/mgrtfset.mspx> [<http://technet.microsoft.com/en-us/library/bb457074.aspx>]

The User State Migration Tool is designed for IT administrators in performing large deployments of Windows XP Professional in a corporate environment. USMT provides the same functionality as the wizard, but on a large scale targeted at migrating multiple users. USMT gives administrators command line precision in customizing specific settings such as unique modifications to the registry.

In addition, this article addresses how IT pros can modify INF files.

[Top of page](#)

Related Links

See the following related deployment papers on Windows XP.

- Step by Step Guide to Migrating Files and Settings at
<http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/mgrtfset.mspx> [<http://technet.microsoft.com/en-us/library/bb457074.aspx>]
- Planning Windows XP Deployment at
<http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/depovg/depdpi.mspx>
[<http://technet.microsoft.com/en-us/library/bb457061.aspx>]
- Implementing Windows XP Deployment at
<http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/depovg/depdpi.mspx>
[<http://technet.microsoft.com/en-us/library/bb457062.aspx>]

For the latest information about Windows XP, check out our Web site at
<http://www.microsoft.com/technet/community/chats/trans/default.mspx>
[<http://www.microsoft.com/technet/community/chats/trans/default.mspx#XSLTsection152121120120>] .

[Top of page](#)

Step-by-Step Guide to Migrating Files and Settings

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Operating System

Abstract

This guide walks you through the Files and Settings Transfer Wizard, which eases the process of copying files and settings from your old computer to a new computer. It is intended for home users, small office users, or users in a "lightly managed" corporate environment.

On This Page

[Introduction](#)

[What Gets Migrated?](#)

[Migrating to a New Computer](#)

[Migrating to a New Computer on Your Home Network](#)

[Migrating to a New Computer Using a Direct Cable Connection](#)

[Migrating to a Clean Installation Of Windows XP](#)

[Summary](#)

[Related Links](#)

Introduction

Getting a new computer often requires repeating much of the same setup configuration you originally did with your old computer. And even after all the reconfiguration, you still don't have your data from the old computer. Locating this data and figuring out how to move it can be a significant challenge. The Windows® XP operating system streamlines this process with the new Files and Settings Transfer Wizard. By providing clear instructions at each step, the wizard walks you through the process of automatically gathering your files and settings from your old computer and transferring them to your new computer.

The wizard is designed for users in a home or small office environment. The wizard is also useful in a corporate network environment for employees who get a new computer and need to migrate their own files and settings without the support of an IT department or Helpdesk.

The wizard provides a rich set of options that walk you through the process of migrating to a new computer.

You can:

- ♦ **Choose how to store files and settings that are migrated.** The wizard supports copying old files and settings via:
 - ♦ 3.5 inch disks or other removable media.
 - ♦ A direct cable connection from your old computer to your new computer.
 - ♦ A drive on a home network.
- ♦ **Customize which files and settings get migrated.** If you already know exactly which files and settings you want to migrate, you can add or remove files directly in the wizard.

Copying files to a home network drive is the fastest method. If you don't have a home network, try using a direct cable connection between your computers. Because the wizard uses auto detection to configure ports for the cable, you don't need to go through any complicated setup procedures.

Finally, using 3.5-inch disks takes the most time as you will usually need one-two disks to migrate settings and five-ten disks to migrate files and settings. The wizard prompts you for each disk as it collects and saves your files and settings on your old computer. When you run the wizard on your new computer, the wizard prompts you to insert the disks in order. Despite the extra time involved, floppy disks remain a viable, low-tech solution that you may wish to use.

This guide walks you through this process using the following scenarios:

- Migrating to a new computer.
- Migrating to a new computer on your home network.
- Migrating to a new computer using a direct cable connection.
- Migrating to a clean installation of Windows XP.

When migrating files and settings for multiple computers in a corporate environment, administrators should use the User State Migration Tool, a command line tool. For more information, see the white paper, "User State Migration in Windows XP."

[Top of page](#)

What Gets Migrated?

This section summarizes the types of files and settings that are migrated.

Migrated Settings

The settings fall into four major groups:

- **Appearance.** This includes items such as wallpaper, colors, sounds, and the location of the taskbar.
- **Action.** This includes items such as the key repeat rate, whether double-clicking a folder opens it in a new window or the same window, and whether you need to double-click or single-click an item to open it.
- **Internet.** These are the settings that let you connect to the Internet and control how your browser operates. This includes items such as your home page URL, favorites or bookmarks, cookies, security settings, dial-up connections, and proxy settings.
- **Mail.** This includes the information you need to connect to your mail server, your signature file, views, mail rules, local mail, and contacts. The mail clients supported are Outlook® and Outlook Express.

Application settings

The wizard currently supports migrating specific application settings including Microsoft Office (Access, Excel, Outlook®, PowerPoint®, and Word). Support for migrating additional applications will be included when Windows XP is released.

Note that only applications settings are migrated; actual applications are not migrated. You will need to re-install applications on your new computer.

Summary of migrated settings

Migrated setting groups include:

- Internet Explorer settings
- Outlook Express settings and store
- Outlook settings and store
- Dial-Up connections
- Phone and modem options
- Accessibility
- Screen saver selection

- ◊ Fonts
- ◊ Folder options
- ◊ Taskbar settings
- ◊ Mouse and keyboard settings
- ◊ Sounds settings
- ◊ Regional options
- ◊ Office settings
- ◊ Network drives and printers
- ◊ Desktop folder
- ◊ My Documents folder
- ◊ My Pictures folder
- ◊ Favorites folder
- ◊ Cookies folder
- ◊ Common Office file types

Migrated Files

Files are migrated by file type (.DOC), folder (C:\My Documents), or specific name (**C:\Important\money.mny**). The wizard moves many of the common file types and folders by default and gives you the option of adding or removing folders, file types, or specific files.

[Top of page](#)

Migrating to a New Computer

In this scenario, you migrate files from an old computer to a new computer. The old computer contains your current settings that you would like to have on your new computer.

Starting the wizard on your new computer

1. Click **Start, All Programs, Accessories, System Tools, Files and Settings Transfer Wizard**. When the **Welcome to the Files and Settings Transfer Wizard** page appears, click **Next**.
2. Ensure **New Computer** is selected and click **Next**.
3. When the **Do you have a Windows XP CD** page appears, select **I want to create a Wizard Disk in the following drive:** and click **Next**.
4. **Insert a blank and formatted 3.5 inch floppy disk into your new computer's floppy drive. The wizard creates the disk and prompts you to go to your old computer as shown in Figure 1 below.**

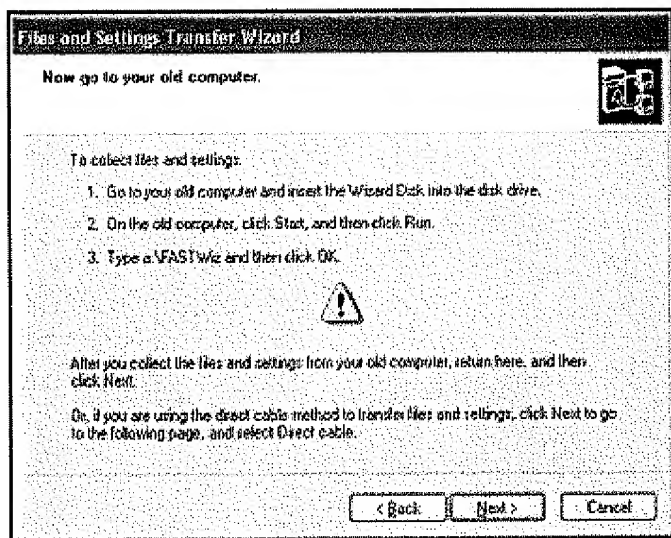


Figure 1: Collecting your files and settings.

Starting the wizard on your old computer

1. Insert the wizard disk into your old computer. When the **Welcome to the Files and Settings Transfer Wizard** page appears, click **Next**.
2. When the **Select a transfer method page** appears, select **Floppy drive or other removable media** and click **Next**. The **What do you want to transfer page** appears, as shown in Figure 2 below.

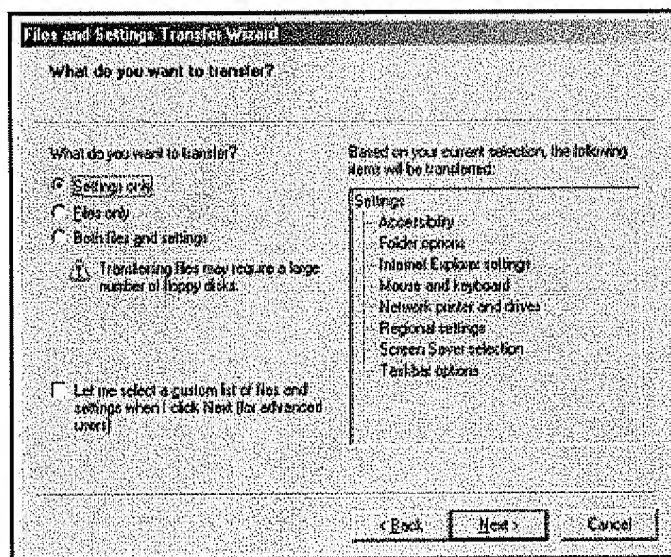


Figure 2: Specifying what to transfer

This page lets you select settings only, files only, or both files and settings. Details of each option appear in the right pane.

3. For the purposes of getting started with this wizard, select **Settings** only and click **Next**.
4. Prepare your 3.5-inch disks. For settings, you may need only one disk. For files and settings, you usually need no more than five or ten 3.5-inch disks for this. When your 3.5-inch disks are ready and formatted, click **Next**.

The wizard scans your old computer and collects all of the settings you requested to migrate. This usually takes a few minutes, depending on the speed of your computer.

5. When prompted for the first 3.5-inch disk, select one of the blank 3.5-inch disks you have prepared, label it **Migration 1**, insert it, and click **OK**.

6. If you are prompted for additional 3.5-inch disks, select another blank 3.5-inch disk, label it the next disk, and so on until the wizard completes.
7. When the **Completing the Collection phase** page appears, click **Finish** and collect all of the 3.5-inch disks you just made.
8. Return to your new computer and continue with the wizard.

Resuming the wizard on your new computer

1. The wizard that you left running on your new computer should still be on the page as shown in Figure 1 earlier. Click **Next**.
2. When the **Where are the Files and Settings** page appears, select **Floppy drive or other removable media** and click **Next**.
3. Insert the disk labeled **Migration 1** (the first disk you created) into the 3.5-inch disk drive. Select **Floppy Drive** (if not already selected) and click **Next**.
4. The wizard reads the collected files and settings from the 3.5-inch disks and applies them to your new computer. Insert each disk as prompted.
5. When all of the disks have been inserted and the settings and files have been applied, the wizard will reach the **Finished** page. Click **Finished**. For the changes to take effect, you are prompted to restart your computer.

[Top of page](#)

Migrating to a New Computer on Your Home Network

A home network is a faster and simpler way to migrate your files and settings from your old computer to your new computer. This scenario assumes you have two computers—an old computer and a new computer—on a home network. This means that, before migrating, you will need to ensure that your new computer running Windows XP can "recognize" your old computer on the network. The old computer contains your current settings and files that you want have on your new computer.

Starting the wizard on your new computer

1. Click **Start, All Programs, Accessories, System Tools, Files and Settings Transfer Wizard**. When the **Welcome to the Files and Settings Transfer Wizard** page appears, click **Next**.
2. Ensure **New Computer** is selected and click **Next**.
3. When the **Do you have a Windows XP CD** page appears, select **I want to create a Wizard Disk in the following drive:** and click **Next**.
4. **Insert a blank and formatted 3.5 inch floppy disk into your new computer's floppy drive. The wizard creates the disk and prompts you to go to your old computer as shown in Figure 1 earlier.**

Starting the wizard on your old computer

1. Insert the wizard disk into your old computer.
2. When the **Welcome to the Files and Settings Transfer Wizard** page appears, click **Next**.
3. When the **Select a Transfer Method** page appears, select **Home or small office network**, and click **Next** as shown in Figure 3 below.

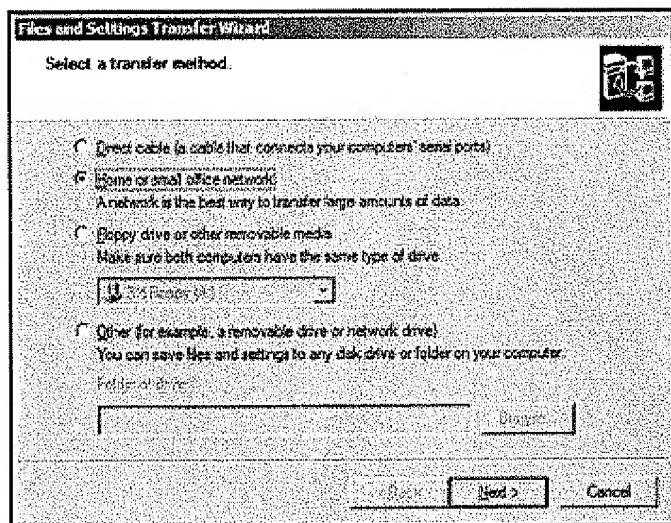


Figure 3: Selecting a transfer method.

4. When the **What do you want to transfer** page appears, select **Both Files and Settings**. Click **Next**.
5. The wizard scans your old computer and collects all of the settings you requested to migrate. This usually takes a few minutes.
6. You are prompted to enter the password displayed on your new computer. Enter the password and click **OK**. When the files and settings are collected, they are automatically transferred to your new computer. The new computer will then apply those settings.
7. When the wizard finishes collecting and transferring the files and settings, it reaches the completion page. Click **Finish** and return to your new computer.

Resuming the wizard on your new computer

1. The Files and Settings Transfer Wizard on your new computer is already applying your files and settings to your new computer. Wait until it is finished.
2. When all the settings and files have been applied, the wizard reaches the Finished page. Click **Finished**. For the changes to take effect, you need to restart the computer.

This is a much faster and more complete way to migrate your files and settings than using a 3.5-inch disk, but it does require you to have a home network. Another way to transfer files and settings is via a direct cable connection explained below.

[Top of page](#)

Migrating to a New Computer Using a Direct Cable Connection

A simple way to migrate files and settings is to use a direct cable that connects your computers via the serial ports. You will need a **serial PC to PC file transfer cable**, available from most computer stores. If you don't know the exact type of cable you need, ask for assistance at a computer store.

Starting the wizard on your new computer

1. Click **Start, All Programs, Accessories, System Tools, Files and Settings Transfer Wizard**. When the **Welcome to the Files and Settings Transfer Wizard** page appears, click **Next**.
2. Ensure **New Computer** is selected and click **Next**.
3. When the **Do you have a Windows XP CD** page appears, select **I want to create a Wizard Disk in the following drive:** and click **Next**.
4. **Insert a blank and formatted 3.5 inch floppy disk into your new computer's floppy drive. The wizard creates the disk and prompts you to go to your old computer as shown in Figure 1 earlier.**

Starting the wizard on your old computer

1. Insert the wizard disk Into your old computer.
2. When the **Welcome to the Files and Settings Transfer Wizard** page appears, click **Next**.

When the **Select a Transfer Method** page appears, select **Direct Cable** and click **Next** as shown in Figure 4 below.

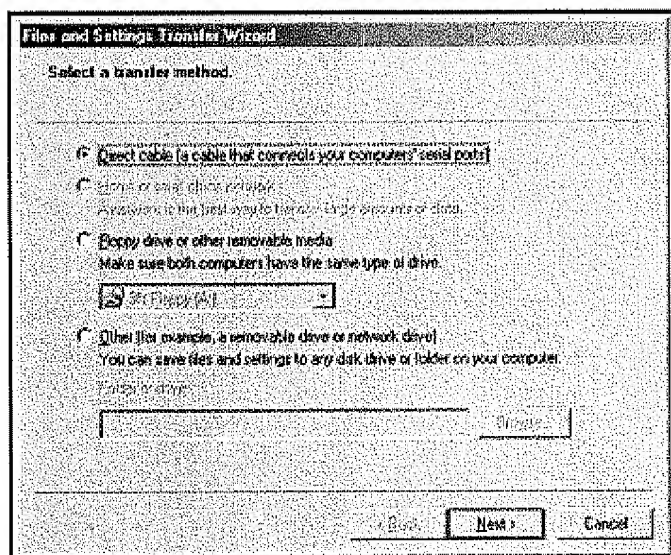


Figure 4: Selecting Direct cable connection.

When the **Set up your serial connection** page appears, complete the following steps.

- Connect your computers with a serial PC to PC file transfer cable.
- Go to the other computer and advance the wizard to the **Set up your serial connection** page.
- Click **Autodetect** on both wizards to select the serial port setting.

When the wizard shows a successful connection, click Next.

The wizard automatically transfers your files and settings to your new computer. You will need to restart your computer for the changes to take effect.

Although both of the preceding scenarios did copy your files and settings, these defaults don't cover all situations and file types. The following scenario describes how to customize the selection of what is migrated.

[Top of page](#)

Migrating to a Clean Installation Of Windows XP

This advanced scenario assumes you have only one computer and are going to perform a clean installation of Windows XP side-by-side with an existing installation of Windows. First, you need to complete a clean installation of Windows XP on your computer, at a different location on your hard drive than your current installation. (It is important you do not choose upgrade, but a clean installation.) You also want to be sure not to overwrite your old installation. The computer will need to be able to boot into either operating system. This scenario assumes that you have already completed this dual installation. For more information, see [Multibooting with Windows 2000 and Windows XP](http://www.microsoft.com/windows2000/techninfo/administration/management/mltiboot.asp) at <http://www.microsoft.com/windows2000/techninfo/administration/management/mltiboot.asp> [<http://www.microsoft.com/windows2000/techninfo/administration/management/mltiboot.asp>] .

Starting the wizard on your old operating system

1. Start your computer by booting into your old operating system. Insert the Windows XP CD.

2. When the Windows XP Welcome screen appears, click **Perform Additional Tasks**, then click **Transfer Files and Settings**.
3. When the **Welcome to the Files and Settings Transfer Wizard** page appears, click **Next**.
4. When the **Select a transfer method** page appears, select **Other**, and then click **Browse** to select a folder that has enough room to store the collected files and settings. You will probably need at least 150 megabytes (MB). Note that later you will need to locate the folder in which you stored the files and settings. Click **Next**.

The **What do you want to transfer** page appears allowing you to select settings only, files only, or both files and settings. When you select an option, the page displays a list of what will be migrated.

5. Select **Both Files and Settings** and select **Let me select a custom list of files and settings when I click Next** as shown in Figure 5 below.

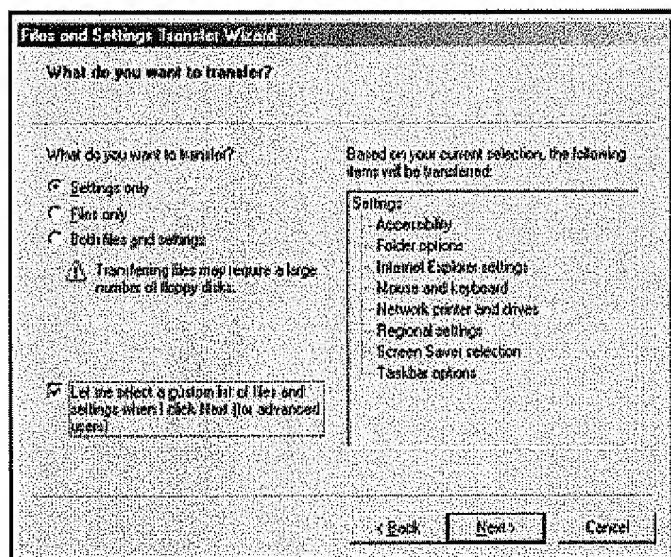


Figure 5: Specifying files and settings for migration.

6. Click **Next**. The **Select custom files and settings** page appears as shown in Figure 6 below.

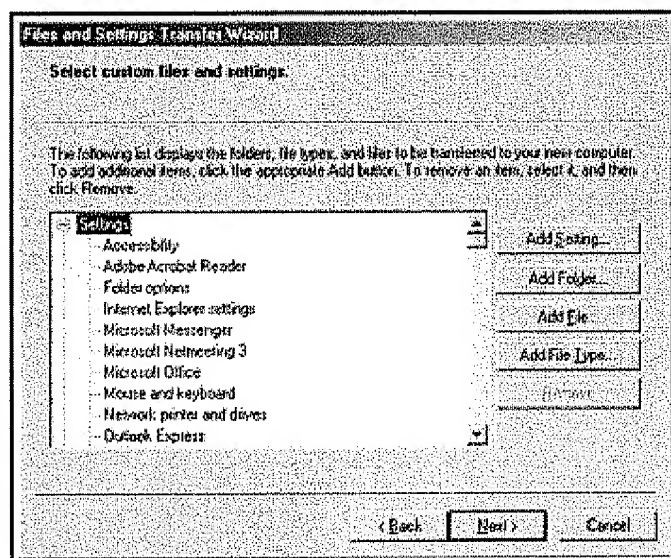


Figure 6: Customizing files and settings for migration.

On the **Select custom files and settings** page, you can add or remove known settings, file types, folders, or specific files. In this scenario, you will want to migrate the default folders, because these are located in a different place in Windows XP; however, you don't need to migrate any of the file types. You can access those files where they are now.

7. Select each of the items in the File Type's tree and click **Remove**. Leave all of the settings. When all of the File Types

have been removed, click **Next**.

The wizard now scans your existing Windows installation and collects all of the settings you requested to migrate. This usually takes a few minutes.

8. When the wizard finishes collecting the files and settings, the completion page appears. Click **Finish**.

Starting the wizard on Windows XP

1. Start your computer by booting into Windows XP. Open the File and Settings Transfer Wizard.
2. When the **Do you have a Windows XP CD** page appears, select **I don't need the Wizard Disk. I have already collected my files and settings from my old computer**. Click **Next**.
3. When the **Where are your files and settings** page appears, select **Other** and click **Browse**. Go to the folder share drive where you stored your files.

The wizard begins reading the collected files and settings and applies them to your new installation.

4. When the settings and files have been applied, the completion page appears. Click **Finished**. For the changes to take effect, you need to restart your computer and boot into your Windows XP installation.

Your files and settings from your old installation should now be applied on your new installation of Windows XP. Some files are duplicated between the two installations, such as files on your desktop, in Favorites, or in My Documents. Other items, such as your mail store, are also duplicated.

[Top of page](#)

Summary

This guide walks you through the Files and Settings Transfer Wizard and explains all the steps needed to successfully use this powerful tool. The wizard streamlines the process of using a new computer by making it easy to duplicate your old computing environment and keep all your settings such as Favorites in Internet Explorer.

Copying your files is also made easier. Although using a home network is the fastest way to copy files, 3.5 inch disks remain a viable option for many users who don't have a network at home.

Furthermore, the wizard can also be useful in "lightly managed" corporate environments where users are expected to migrate their own files and settings without very much assistance from IT support professionals.

For large scale automated migrations, IT professionals should employ the User State Migration Tool, explained in the companion paper User State Migration in Windows XP at <http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/usermigr.mspx> [<http://technet.microsoft.com/en-us/library/bb457090.aspx>] .

[Top of page](#)

Related Links

User State Migration in Windows XP at <http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/usermigr.mspx> [<http://technet.microsoft.com/en-us/library/bb457090.aspx>]

Multibooting with Windows 2000 and Windows XP at <http://www.microsoft.com/windows2000/techinfo/administration/management/mltboot.asp> [<http://www.microsoft.com/windows2000/techinfo/administration/management/mltboot.asp>]

For the latest information on Windows XP, check out our Web site at <http://www.microsoft.com/technet/community/chats/trans/default.mspx> [<http://www.microsoft.com/technet/community/chats/trans/default.mspx#XSLTsection152121120120>] .

[Top of page](#)